


# Refining the Future: Oil and Gas in Indonesia

By Andrew Steele

**With high energy prices rocking world markets, Indonesia is at a crossroad. Its own vast energy resources are being depleted, and unless it devotes sufficient efforts to developing additional oil and gas reserves, it could lose the backbone of its economic development, writes energy market specialist Andrew Steele.**

 THE ASIAN FINANCIAL CRISIS of the late 1990s dealt a body blow to Indonesia's economy, but ten years later both long-time observers and champions of the underperforming country are again optimistic.

Strategically positioned between Australia to the south and China and East Asia to the north, the country's geographic location affords multiple opportunities to access lucrative markets in both directions. Sizeable proven oil and gas reserves and a robust labor force coupled with greater political stability and legal certainty than in the past add to Indonesia's potential to sustain higher levels of growth.

The good news is tempered by hard challenges ahead. Absent the discovery of new reserves, the country must prepare for the loss of revenue from the oil and gas sector. According to PricewaterhouseCoopers, Indonesia's oil reserves could be depleted within 10 to 20 years and its natural gas reserves within 30. Current government estimates put proven oil reserves at 4.37 billion barrels and potential reserves at 4.558

billion barrels. Gas reserves are equivalent to roughly three times that, with 94 trillion standard cubic feet in proven reserves and 93.1 trillion standard cubic feet in potential reserves.

Since independence in 1949, revenues generated from natural resource extraction—particularly oil and gas—have formed the economic backbone of development. Through the early 1980s, over half of total government revenues came from the sector, and it still accounted for 40 percent of spending in 1990 and 24 percent in 2005.

The decline, however, has not been offset by an increase in non-petroleum associated industries. Therein lies the problem. Development of a plan to replace the revenue lost as oil and gas reserves are depleted is imperative. Two strategies are often mentioned. Investments in non-petroleum based industries must be encouraged and infrastructure investments must occur, particularly in the country's antiquated education sector.

But even though revenue from the oil and gas sector is essential to drive those needed changes, industry executives and government officials say that the sector is not receiving the attention it needs. While the current executive branch is more focused on increasing production than previous administrations, increases are unlikely until reforms are implemented to boost the sector's administrative capacity to vet more proposals, award additional blocks, and regulate new fields.

In 2007, production of crude and condensate fell to a new low of 850,000 barrels a day, compared to 1.5 million barrels a day produced in 1994. Furthermore, Indonesia, which was the world's largest exporter of Liquefied Natural Gas (LNG), largely through its eight-train LNG facility in East Kalimantan, lost that position to Qatar in 2005.

#### **BUBBLING OVER: AN HISTORICAL REVIEW**

Indonesia boasts a rich oil and gas history. It became Asia's only OPEC member when it joined in 1962. Declining production, however, drove it to withdraw from the cartel in May of this year. And the country's oil patch ranks as one

*Since independence  
in 1949, revenues  
generated from  
natural resources  
—particularly oil  
and gas—  
have formed the  
economic backbone  
of development.*

of the world's oldest. A Dutch company, which eventually merged to become industry giant Royal Dutch Shell, discovered fields in north Sumatra in 1883 and began producing commercial quantities of crude there in 1892. But with Indonesia not formally gaining independence until December 27, 1949, the sector was under foreign control for decades: first by the Dutch during colonial rule and later under Japanese occupation during World War II.

The government steadily increased its authority over oil and gas activities after independence. Two key events that shaped the sector were the establishment of the state-owned national oil company Pertamina and the negotiation of a production sharing contract (PSC) for companies operating there. As historian William Frederick wrote, "The post independence government increased its control over the oil sector during the 1950s and 1960s by increasing operations of several government-owned oil companies and by stiffening the terms of contracts with foreign oil firms."

Permina, the predecessor of Pertamina, began operating in the late 1950s, focusing on the abandoned Shell fields in north Sumatra and other areas that the Japanese briefly controlled. Under the leadership of Lt. Gen. Ibnu Sutowo, the oil giant became known as the “army company,” as noted by the late Columbia University scholar John Bresnan.

Sutowo collaborated with foreign consultants to revive the fields in Sumatra and the oil and gas industry in general. With technical assistance and loans from Japan, Indonesia rebuilt the sector. In 1963, Caltex, Royal Dutch Shell and Standard Vacuum handed over their concessions to the government and worked thereafter as contractors. Thus began the PSC era in Indonesia.

After former President Suharto officially took power in 1967, he saw to the enactment of legislation the following year that nationalized Permina and merged it with other state-owned enterprises from the energy sector to create Pertamina. The law gave Pertamina the power to negotiate all contracts with foreign companies operating in Indonesia, and in 1968-1969 the country's push toward becoming a major oil producer began in earnest.

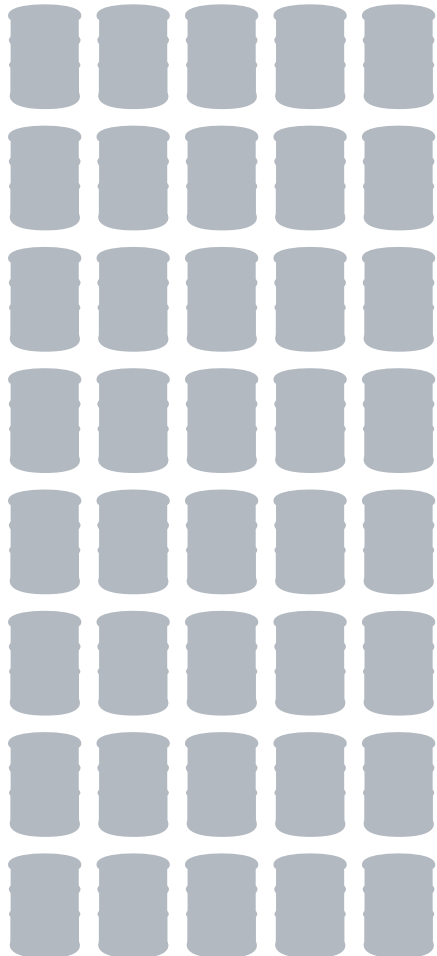
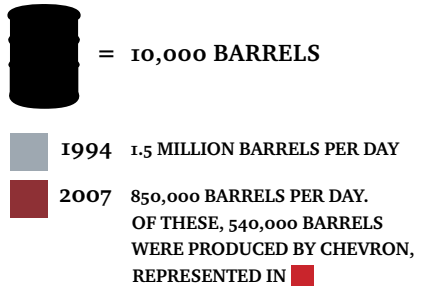
Another major change occurred in the late 1960s when exploration costs were shifted to companies. If and when oil was discovered, the arrangement allowed the company to recover its exploration costs while sharing in production revenues with the government. The contract was the first of its kind and was later used in other oil producing countries worldwide.

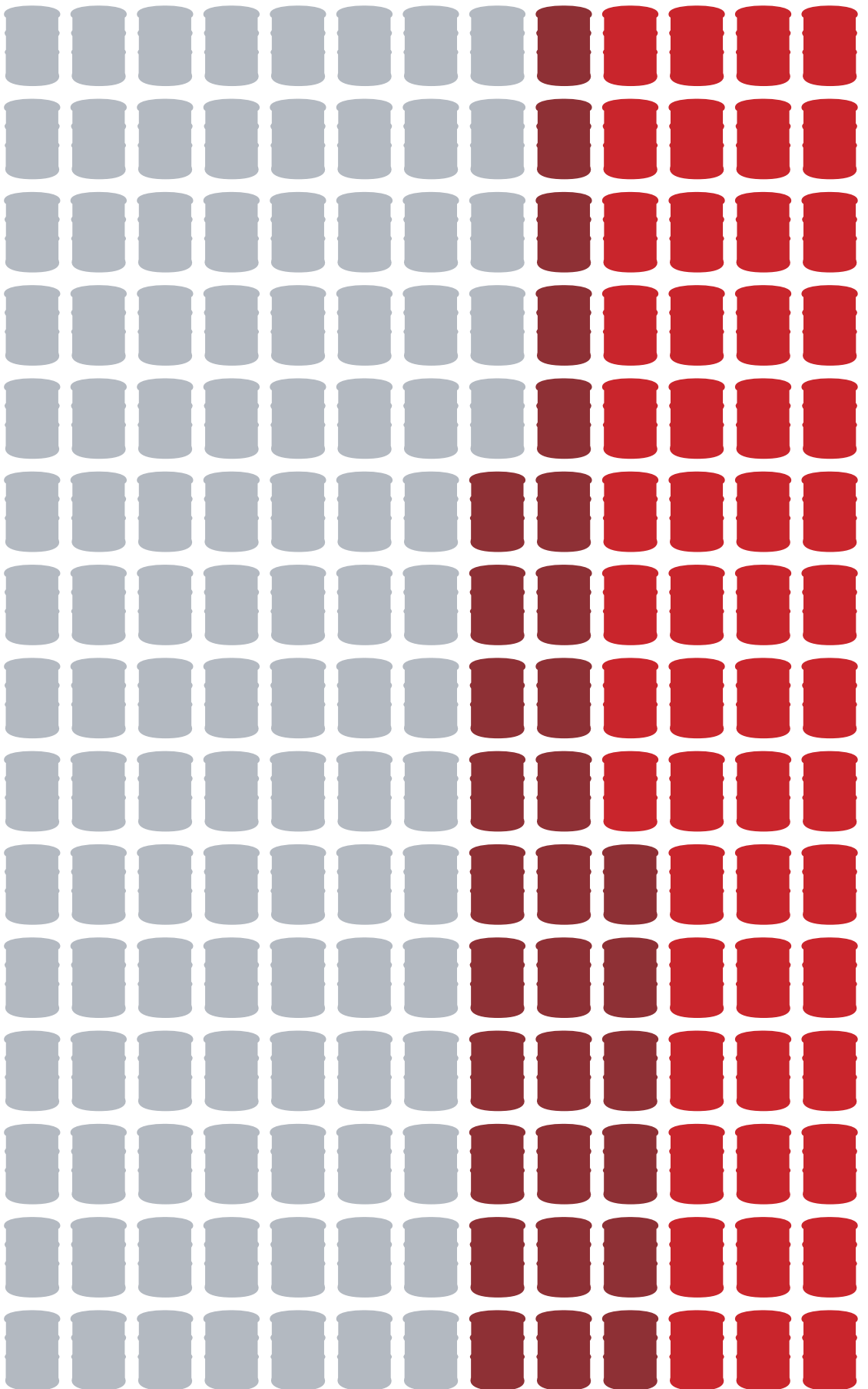
In 1969, 30 PSCs were signed and more followed in the next few years. The government reaped a huge cash windfall from those contracts. In 1972, Caltex was pumping one million barrels a day in Indonesia, while Pertamina produced an additional 100,000 barrels. Fortuitously, the increased production came ahead of the 1973 oil price hike.

With sustained production and interest in Indonesian oil, the sector matured. Petroleum engineering degrees were offered at the Universitas Pembangunan Nasional in Yogyakarta and the Bandung Institute of Technology (ITB). The lat-

**COMPARING THE PRODUCTION OF CRUDE AND CONDENSATE IN INDONESIA: BARRELS PER DAY IN 1994 AND 2007**

**KEY**





ter remains the country's prime supplier of oil and gas professionals. Sometimes referred to as the "ITB mafia," graduates from ITB hold nearly every top job among civil servants working in the sector and are well represented at most oil and gas companies in Indonesia.

Despite a growing, technically qualified labor force, easy-to-find reserves diminished. Wells that once gushed with oil slowed, reducing profit margins. But while marginally producing fields were abandoned, exploration investment dwindled. Potential offshore deepwater basins and remote areas of eastern Indonesia also were ignored. By the mid-1990's, production was on the decline.

The drop in production, however, was not only a result of problems within the sector but also from external factors. That was highlighted in the May issue of the *Oil and Gas Financial Journal*, which stated that the oil and gas industry is "highly sensitive to internal political and economic changes and this has particularly been the case of Indonesia." Over the last decade a series of events negatively impacted the investment climate generally and the oil and gas sector specifically. Political transitions, secessionist movements, the Asian Financial Crisis, terrorist attacks, bird flu and natural disasters all took a toll.



#### **BATTLING FOR OIL AND GAS: THE UPSIDE TO THE UPSTREAM**

During the last seven years, however, some key actions helped reignite the oil and gas sector. First, the passage of the 2001 Oil and Gas Law ended Pertamina's monopoly on both upstream and downstream activities. The law also aimed to bring greater transparency to the sector by creating a new regulatory body, BPMigas. That was an important step in restoring faith in the sector at a time when investment interest continued to wane. Secondly, perceptions of political stability improved after the 2004 presidential election. Finally, and perhaps most importantly, the enactment of two much anticipated government regulations occurred in October 2004, providing further clarification of provisions in the 2001 law.

Oil executives and industry analysts cite a range of other factors that bolstered interest. A more transparent tender process, direct offers for oil exploration blocks, more generous splits and incentives for marginal fields (something that enticed local players) and a vast area of untapped deepwater basins in eastern Indonesia have all made the country appealing again. Those changes occurred against the backdrop of rising oil prices worldwide.

Untapped Coal Bed Methane reserves have also attracted interest from both domestic companies, like Ephindo, a pioneer in the field, and from majors such as Shell, which has been seeking partnerships with Pertamina to develop CBM. To date, however, exploration has been constrained by the government's failure to release "fiscal terms" for CBM.

Even so, the government's willingness to negotiate with companies sets Indonesia apart from other oil producing nations, say oil executives in Jakarta. For the most part, oil companies have accepted less favorable "splits" in return for an environment in which contract sanctity has improved. Government agencies, including the directorate general Migas and BPMigas also have become more supportive of investors.

The renewed interest in Indonesia's oil and gas is evident through the increasing amount of awarded acreage and the number of signed blocks. All five of the world's largest publicly listed oil and gas companies (ExxonMobil, BP, Total, Chevron, and Shell) and nearly every second tier company, including Norway's Statoil, the world's largest offshore operator, have expressed interest in further investments in Indonesia. Also, the return of Shell to Indonesia after an absence of over 40 years is another major development.

China's CNOOC is active as well and has become Indonesia's largest offshore producer. Analysts, however, are quick to criticize the company, saying that it does not bring world-class practices to the oil fields; they cite its poor environmental record in Indonesia as evidence. Moreover, because the company is not restricted by legislation such as America's Foreign Corrupt Practices Act, it is seen to have a greater degree

*To explore its deepwater basins and develop existing fields, Indonesia needs capital. That provides more leverage to international companies, which generally have easier access to financial markets than smaller domestic players.*

of flexibility when dealing with Indonesia's notoriously corrupt public sector.

As the five majors and the rest of the pack search for new reserves, they must now compete with more local players like Medco, the country's largest publicly traded oil and gas company, and smaller players like Ephindo and Star Energy. Insiders say that Medco has successfully used its nationalist credentials to gain favor within the government to speed up approvals. But nationalism alone is not enough to secure acreage.

To explore its deepwater basins and develop existing fields, Indonesia needs capital. That provides more leverage to international companies, which generally have easier access to financial markets than smaller domestic players.

Both the majors and domestic companies, however, share the desire to partner with Pertamina. As a result of the 2001 Oil and Gas Law, Pertamina was deemed a limited liability company and is no longer a classic state-owned enterprise. The company still holds hundreds of fields, but has neither the capital nor the technical capacity to explore and exploit most of them. As a result, the company is an attractive entry-point for multinationals seeking to do business in Indonesia.

Pertamina has set a target to be a non-listed public company by the end of 2008. And the company faces significant challenges in getting

its house in order. Corrupt practices, including fuel smuggling that prevailed during Suharto's tenure, still exist to a degree. Perhaps due to fears that those practices might be exposed, both senior executives and lower level staffers are hesitant to meet with outsiders.

But transparency and accountability are most likely to take root after privatization occurs, not before. Elements within the company that would prefer to maintain the status quo can be overcome with the scrutiny of outside investors. Because nearly every oil company operating in Indonesia has partnered with Pertamina, an IPO would no doubt be welcomed. Should that transpire, a new era at Pertamina could begin.

Today, Chevron remains the largest oil producer in Indonesia. After taking over Caltex and Unocal's assets, it is responsible for over half of the country's production. In 2007, it produced 540,000 barrels a day, primarily from its operations in Sumatra. The company also has blocks in other areas, including resource rich East Kalimantan.

ExxonMobil is hopeful that production will soon commence from its Banyu Urip field in central Java. With 600 million barrels of proven oil reserves in addition to sizeable gas deposits, the onshore find is the biggest in recent years in Indonesia. Although land acquisition issues have severely delayed the project, it will

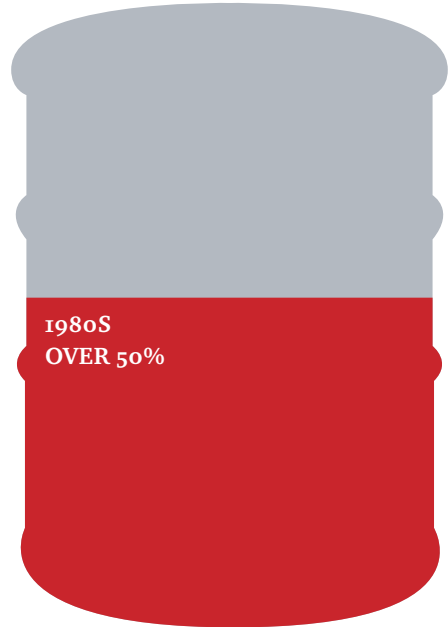
likely come on line in 2010, with production of 150,000 barrels a day expected.

The company also is engaged in negotiations with the government over rights to the Natuna gas fields in northwest Indonesia. While the fields have a high carbon content, making exploitation expensive, they possess 46 trillion standard cubic feet of recoverable gas reserves and 80 trillion standard cubic feet of potential reserves. The government terminated the company's contract for Natuna in 2006, and several other companies, including Shell and Statoil, have since formally expressed their interest in developing the fields. But sources close to ExxonMobil say that it remains very confident that it will eventually receive another contract for Natuna.

Meanwhile, French giant Total remains Indonesia's largest producer of natural gas through its acreage in East Kalimantan's Mahakam Delta. The company is embroiled in negotiations with the Indonesian government regarding the renewal of its PSC there, which expires in 2017. While there remains an abundance of gas in the area, the company will need to invest US\$6 billion before 2017 to manage the decline of the reserves. Committing capital of such magnitude is unlikely until a new contract or a renewal of its existing PSC occurs.

BP is set to bring the Tangguh gas field in West Papua online this year. The company holds 37 percent of the field, which has 14.4 trillion standard cubic feet of proven gas reserves, and is partnering with CNOOC among others. Government officials say that the British company has created a lot of goodwill since starting the project by placing Indonesians in most of senior management positions and by collaborating with the government on Domestic Market Obligation issues.

**PROBLEMS AND FRUSTRATIONS:  
THE DOWNSIDE TO THE UPSTREAM**  
The outlook for Indonesia's oil and gas sector is far brighter today than a decade ago. Every company operating in the country hopes to strike black gold in the deepwater basins of eastern Indonesia or in other resource rich areas. But

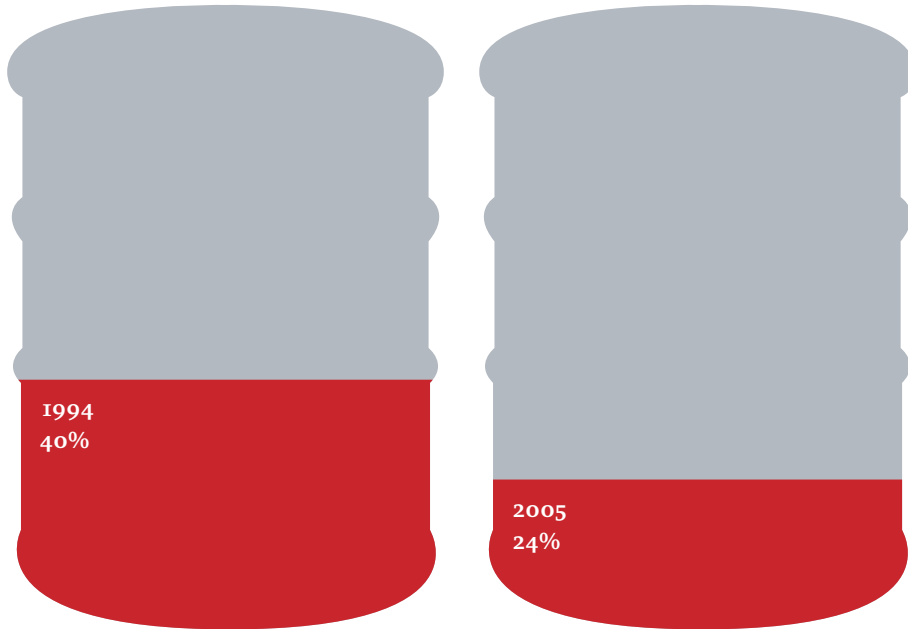


**AMOUNT OF GOVERNMENT REVENUE DERIVED FROM NATURAL RESOURCE EXTRACTION**

as the battle for assets and acreage continues, significant risks still exist.

The sector's development—and thus the government's revenues—remains hamstrung by problems both on the government side and within oil and gas companies. While increased interest exists in the energy sector, oil executives and government officials alike maintain that the government has not demonstrated sufficient urgency. Many regulations remain inconsistent and lack clarity. Regional governments also want a greater share of the revenue stream and taxation issues persist.

One major issue is the Domestic Market Obligation, which was enacted as part of the 2001 Oil and Gas Law and states that up to 25 percent of oil and gas discoveries must be sold on the domestic market at a subsidized rate. While that is a primary point of contention between the public and private sectors, industry executives point out that the law does not state who must pay for the infrastructure to get the oil and gas to market. More importantly, they say it does not



state whether DMO applies to both uncommitted and committed reserves. Some believe that the lack of clarification has strangled investment more than any other factor.

That said, companies are no longer unilaterally opposed to the DMO, provided that the government addresses several issues of critical importance. As noted above, chief among those is the pricing of natural gas on the domestic market and the percentage of a field that must be allocated for domestic use. Mere assurances from government officials that those issues can be negotiated are not enough.

Other major problems impacting the sector are the notoriously long delays by BPMigas, the upstream regulator, in issuing approvals and the delayed announcement of blocks by Migas, the directorate-general for oil and gas. But there also have been missteps by foreign companies that have failed to adapt to cultural differences in Indonesia. That has caused difficulties in building relationships at BPMigas and within the government more generally.

A few simple adjustments within both the private and public sectors may hold the key to increasing the production of oil and gas in Indonesia. Companies may decrease approval times by applying more bottom-up approaches to relationship building. That should help ease approvals at both BPMigas and Migas, as senior management at both are known to be predisposed to agree with the recommendations of subordinates. Within government, politicians should adjust their often short-term outlook in order to take care of present day needs while thinking about a long-term plan for developing the sector—and thus the country.



**Andrew Steele has written about politics and business in Southeast Asia, both as a journalist and consultant, for over seven years.**